Pterra CONSULTING since 2004

PRC - 29 Compliance Study

Innovation
Independence
Leadership

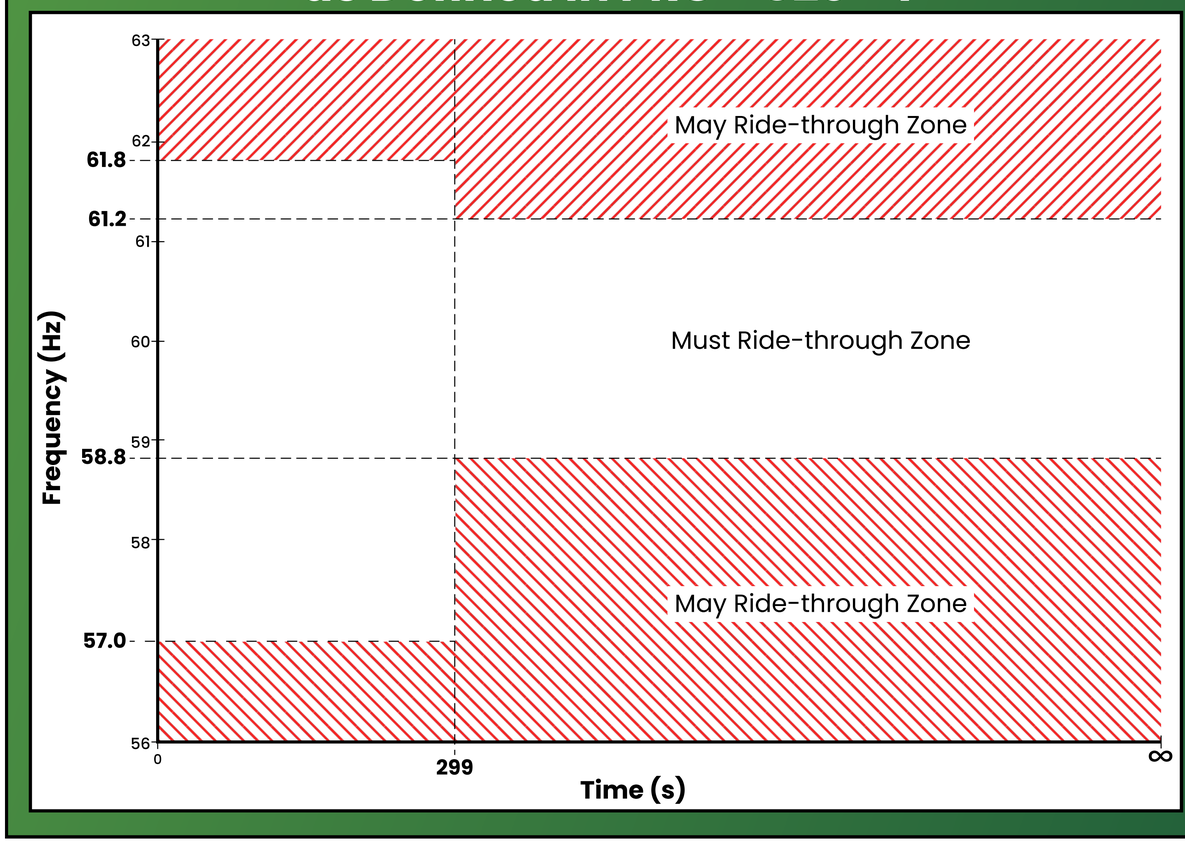
Is Your Fleet Ready for PRC-029-1?

Frequency & Voltage Ride-Through Compliance for Inverter-Based Resources

The deadline is here! On July 24, 2025, FERC approved NERC Reliability Standard PRC-029-1 under Order No. 901, establishing mandatory frequency and voltage ride-through performance requirements for inverter-based resources (IBRs). Beginning **October 1, 2026**, solar PV, wind, and battery storage owners must demonstrate that their plants ride through grid disturbances — not trip off when the system needs them most.

This is a fundamental shift. Unlike the standards it replaces, PRC-029-1 is **performance-based**. Compliance is no longer about a single relay setting — it is about how your inverters actually behave across the full voltage and frequency ride-through envelope. For Generator Owners, that means real engineering analysis, not paperwork. **Pterra makes compliance straightforward.**

Latest Frequency Ride-through Requirements as Defined in PRC - 029 - 1



What We Deliver

Compliance Gap Analysis — We evaluate your plant's inverter design and protection settings against PRC-029-1 Requirements R1, R2, and R3, identifying exactly where you stand and what, if anything, must change.

Ride-Through Modeling in PSS/E — Using industry-standard positive-sequence simulation, we validate voltage ride-through, active power recovery, frequency ride-through, and ROCOF performance against the standard's Attachment 1 curves and IEEE Std. 2800 - 2022 thresholds.

EMT Validation When It Counts — For weak-grid sites or interconnection obligations under FERC Order 2023, our PSCAD/EMTDC capability and proprietary dqBOT automation tool deliver high-fidelity model validation and platform benchmarking.

Corrective Settings Recommendations — Where gaps exist, we provide specific, implementation-ready relay and inverter parameters — the actionable detail your team and OEM need.

Audit-Ready Documentation — Every study is structured to serve as direct evidence in a NERC compliance review.

Why Pterra?

- **Right-sized Scope, Honest Advice**

PRC-029-1 design compliance can often be demonstrated through PSS/E and documentation review alone. We tell you what the standard actually requires — and won't sell you analysis you don't need.

- **Deep IBR Expertise**

Our engineers have modeled and benchmarked dozens of commercial-grade inverter and controller platforms across solar, wind, and BESS projects nationwide.

- **Independent and Trusted**

With no affiliation to manufacturers or developers, our findings are grounded solely in engineering rigor and your interests.

- **Proven Across the Grid**

From thousands of DER studies to utility-scale interconnections across NYISO, PJM, ISO-NE, MISO, SPP, ERCOT, and beyond — we know how IBRs behave on real systems.

Don't Wait for the Deadline!

The October 1, 2026 compliance date is firm. Early action means a smoother path, time to implement any required changes, and confidence heading into your next audit cycle.

Contact Us

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